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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,328	10/07/2004	Bardo Schmitt	259240US0PCT	1797

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EXAMINER
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PEZZUTO, HELEN LEE

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/509,328	<b>Applicant(s)</b> SCHMITT ET AL.	
	<b>Examiner</b> Helen L. Pezzuto	<b>Art Unit</b> 1713	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 12-20, 24-26, 30-32, 34 and 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 21-23, 27-29, 33 and 35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-36 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-11, 21-23, 27-29, 33, and 35 in the reply filed on 4/7/06 is acknowledged. The traversal is on the ground(s) that Group II claims require conditions and reaction amounts of formula II not found in the French patent. This is not found persuasive because FR-411 specifically teaches a using a molar ratio of methacrylic anhydride/dimercaptan of formula (II) in the range of 1.8 to 2.2 (page 3, lines 21-23), which clearly encompass the instant 1.0 to less than 2.0 mol of (III) with one mole of (IV), expressed in the present claims.

The requirement is still deemed proper and is therefore made FINAL.

Currently, Claims 1-11, 21-23, 27-29, 33, and 35 are under consideration in this application.

2. Claims 12-20, 24-26, 30-32, 34 and 36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/7/06.

***Specification***

3. The disclosure is objected to because of the following informalities:

On page 5 (i.e. lines 6-21), applicants made references to categories of pending claims and their respective numberings. Such references are not preferred in the event of future amendment and cancellation of the pending claims.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for X defined on page 17 of the specification, does not reasonably provide enablement for the definition of X in the present claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The X radical defined on page 17 differ than those expressed in claim 1 in that they are ethylenically unsaturated.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 27-29, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Do applicants intend "mixture of compounds (I) and (II)" in the "transparent plastic" is formed by reacting...? The transparent plastic in claim 1 is expressed as being prepared by "polymerizing" a mixture of compounds (I) and (II). Please clarify.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-11, 21-23, 27-29, 33, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bader et al. (US-379) in view of FR 2771411 (with respect to claim 8) for the reasons of record.

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The examiner remains of the position that the instant mixture product produced by the process of reacting (III) and (IV) falls within prior art 1:0.5 to 0.5:1 (I) and (II) mixture, though produced by a upper limit of less than 2.0 mol of (III), abutting prior art at least 2.0 mol of (III). Absent clear evidence of unexpected results derived from the instant less than 2.0 mol of (III), the range of the prior art establishes prima facie obviousness because one of ordinary skill in the art would have expected the closely similar ranges of (III) to result in products having the same or essentially the same properties. The comparative evidence presented is not clear and convincing with respect to criticality of molar ratios of (III) and (IV). The comparative showings of record exhibited in tables 1 and 3 are not clear and convincing because they are not conducted in a side-by-side manner with fixed variables (i.e. reaction solvent, mol of NaOH used, reaction temperature, relative mol% of EDTDMA used to make the polymer), and many variables are contained therein. It is not clear whether the differences in refractive index is due to variations in reaction conditions (i.e. B1-B4 is conducted at 25-30 °C, whereas VB1-VB3 is conducted at 15-20

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°C; VB1 and VB3 used 2.3 mol of NaOH, whereas B1-B4 used 1.692-1.760 mol NaOH), or due to the use of less than 2.0 mol of (III) as alleged by applicants. The examiner remains of the position that evidence presented in comparative showings must be clear and convincing.

***Claim Rejections - 35 USC § 102/103***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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11. Claims 1-11, 21-23 27-29, 33, and 35 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Smith et al. (US-571).

US 6,342,571 to Smith et al. discloses a process of producing a high refractive index optical resin composition, derived from polymerizing composition containing, inter alia, a mixture of thio(meth)acrylate functional monomers comprising (a)(i) and (a)(ii), first and second thio(meth)acrylate functional monomers within the scope of the instant compounds (I) and (II), respectively. The instant mixture produced by reacting (III) and (IV) recited in a product by process format appears to be identical to prior art thio(meth)acrylate mixture (a)(i) and (a)(ii), produced by reacting a (meth)acryloyl chloride or (meth)acrylic anhydride (B) with a polythiol (i.e. 1,2-ethanedithiol) (A), in a molar ratio of (B) to (A) from 1.3:1 to 2.5:1, within the scope of the instant ratio (col. 5, lines 9-62). Prior art specifically teaches controlling the relative amounts of monomers (a)(i) and (a)(ii) by selecting the suitable molar ratios of (B) and (A) used in the reacting process. The resultant polymerizates obtained by prior art process is a transparent solid with optical utilities, having a



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refractive index of at least 1.57 and an Abbe number of at least 35 (col. 13, lines 36-49), within the scope of the instant properties. A casting composition comprising solely of thio(meth)acrylate mixture (a)(i) and (a)(ii) was exemplified in Example 1 (see col. 16, Tables 1 and 2).

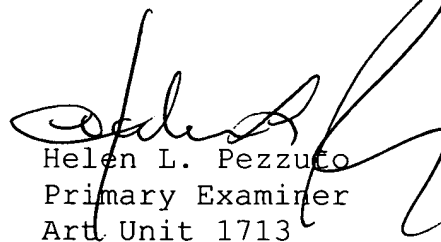
Accordingly, the examiner is of the position that prior art polymerized product which appear to be identical to applicants, necessarily or inherently possess the optical characteristics/properties of applicant's product.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp